

CENTRAL PLANT GROUND SOURCE HEAT PUMP (GEOTHERMAL)



Figure 1. Geothermal Central Plant Ground Source Heat Pump System





Figure 2. Natural Gas Boilers

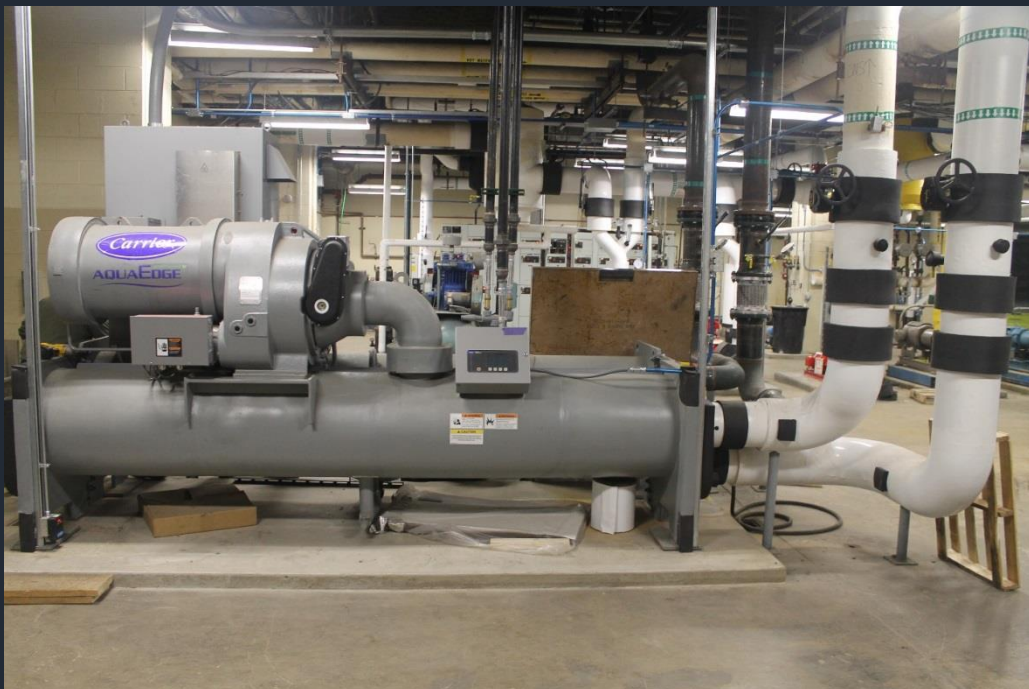


Figure 3. Chiller Replacement and Chilled Water Piping



Figure 4. New Natural Gas Domestic Hot Water Heater

Cost	Savings Estimated (kBtu)	Notes
\$3,906,811	5,489,991	New heat pump systems, natural gas boilers and high efficiency chillers will significantly reduce energy costs and GHG emissions and address critical infrastructure needs; Skokie's new renewable energy geothermal heat pump system will provide most of the heating and cooling requirements year-round

NEW AHU FANS AND VFDS



Figure 5. AHU Fan Replacement and Updated VFD Controls

Cost	Savings Estimated (kBtu)	Notes
\$697,200	755,664	Failing supply and return fans at Skokie will be replaced

CONTROL SYSTEM UPGRADES



Figure 6. AHU Control Upgrades



Figure 7. New Pneumatic Controls Filters

Cost	Savings Estimated (kBtu)	Notes
\$918,706	4,546,132	Upgrade existing AHU and central plant controls to state-of-the-art direct digital controls, with optimized energy efficient control strategies

LED LIGHTING UPGRADES (INTERIOR AND EXTERIOR)



Figure 8. Interior LED Replacement



Figure 9. Exterior LED Replacement



Figure 10. Exterior Sensor LED Parking Garage Lighting

Cost	Savings Estimated (kBtu)	Notes
\$1,781,927	4,044,199	Complete modernization of the lighting systems with the latest long life light emitting diode (LED) technology, including occupancy controls in selected areas.

BUILDING WEATHERIZATION



Figure 11. Weatherization at Windows

Cost	Savings Estimated (kBtu)	Notes
\$31,987	312,365	Weatherize building envelope at doors and windows

WINDOW REPLACEMENT



Figure 12. Skokie Exterior and Windows

Cost	Savings Estimated (kBtu)	Notes
\$2,228,948	1,059,135	Replace deteriorated windows.

ELECTRIC VEHICLE CHARGING STATION



Figure 13. ChargePoint Dual Port Charging Station



Cost	Savings Estimated (kBtu)	Notes
\$32,006	NA	Install new Level II electric vehicle (EV) charging stations at each courthouse for public/staff EV drivers with revenue opportunity